

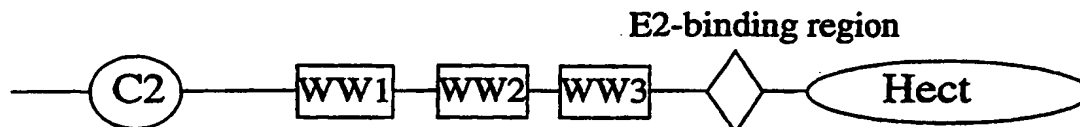


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(21) International Application Number: PCT/CA00/00042 (22) International Filing Date: 20 January 2000 (20.01.00) (30) Priority Data: 2,259,830 20 January 1999 (20.01.99) CA (71) Applicant (for all designated States except US): HSC RESEARCH AND DEVELOPMENT LIMITED PARTNERSHIP [CA/CA]; Suite 5726, 555 University Avenue, Toronto, Ontario M5G 1X8 (CA). (72) Inventors; and (75) Inventors/Applicants (for US only): ROTIN, Daniela [CA/CA]; 27 Jessica Gardens, Thornhill, Ontario L4J 3G1 (CA). PHAM, Nam [CA/CA]; 127 Greenlaw Avenue, Toronto, Ontario M6H 3V9 (CA). (74) Agent: DEETH WILLIAMS WALL; National Bank Building, Suite 400, 150 York Street, Toronto, Ontario M5H 3S5 (CA).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>

(54) Title: RAS ACTIVATOR NUCLEIC ACID MOLECULES, POLYPEPTIDES AND METHODS OF USE

Rat Nedd4



(57) Abstract

The invention is a GRF4 nucleic acid molecule and its corresponding protein which has an important role in cell signaling. The invention also includes biologically functional equivalent nucleic acid molecules and proteins. The invention also relates to methods of using these nucleic acid sequences and proteins in medical treatments and drug screening.